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20350	7590	09/08/2004	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			LEE, ANDREW CHUNG CHEUN	
TWO EMBARCADERO CENTER			ART UNIT	
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DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/810,938

Applicant(s)

HJARTARSON ET AL.

Examiner

Andrew C Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date Aug 07 2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because the Title "SYSTEM AND METHOD FOR PROGRAMMABLE SPECTRUM MANAGEMENT" is not required. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 4, 5, 15 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Page 7, line 1 and 2 of claim 4, "said plurality of separate transmission channels are directed to a plurality of different service providers"; Page 7, lines 1 to 3 of claim 5, "said plurality of separate transmission channels comprising a plurality of signals with a plurality of different modulation schemes." and Page 8, lines 6 and 7 of claim 15, "transmitting said plurality of separate bands to a plurality of different service providers". Page 8 lines 1 and 2 of claim 16. "said separate bands are transmitted to said plurality of different service

providers through a data network and a voice network” The disclosure does not provide clearly and concisely how the different digital bit streams in different frequency bands be routed or transmitted to the service providers or what protocol is used. The disclosure also fails to teach and specify clearly the plurality of signals with different modulation schemes be implemented in separate transmission channels.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11, 13 and 14 recite the limitation "POTS detector circuit" in line 2 of claim 11, line 1 of claim 13 and line 1 of claim 14. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 15 – 17 are rejected under 35 U.S.C. 102(e) as being anticipated by O'Toole et al. (U.S. Patent No. 5889856).

Regarding Claim 15, O'Toole et al. discloses the limitation of providing a plurality of services over a twisted pair telephone line (Abstract, lines 1 – 3), comprising the acts of receiving a broadband analog signal from said twisted pair telephone line (column 3, lines 31 – 32; lines 42 – 45); filtering said broadband analog signal using a programmable filter into a plurality of separate bands (column 5, lines 33 – 36); and transmitting said plurality of separate bands to a plurality of different service providers (column 4, lines 26 – 31).

Regarding Claim 16, O'Toole et al. discloses the limitation of separate bands be transmitted to said plurality of different service providers through a data network and a voice network ( column 6, lines 26 – 40).

Regarding Claim 17, O'Toole et al. discloses the limitation of said programmable filter is upgraded by programming said filter with software (column 7, lines 62-65; column 10, lines 14-16).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole et al. (U.S. Patent No. 5889856) in view of Liu et al. (U.S. Patent No. 5889856) and Timm et al. (U.S. Patent No. 6522730 B1).

Regarding Claim 1, O'Toole discloses the limitation of a line interface for coupling a twisted pair telephone line with a communications network (Abstract, lines 1-3), comprising: a broadband analog front end circuit coupling said twisted pair telephone line with said line interface (Fig. 5; column 6, lines 31-34); and O'Toole et al. discloses a programmable filter coupled to receive an output signal from said broadband analog front end circuit (Fig. 7, column 8, lines 39-47; column 5, lines 34-36), But he fails to disclose explicitly configured to filter frequency bands of said output signal into a plurality of separate transmission channels, wherein said plurality of separate transmission channels are associated with said communications network, and wherein said frequency bands are determined by programming said programmable filter. Liu et al. discloses the limitation of configuring filter frequency bands of said output signal into a plurality of separate transmission channels (Fig. 6 column 19, 39-45; column 20, lines 10-14), wherein said plurality of separate transmission channels are associated with said communications network (Fig. 1; column 7, lines 58-64), and wherein said frequency bands are determined by programming said programmable filter (column 20, lines 4-7; column 14, lines 26-29). It would have been obvious to modify O'Toole et al.

to include configuring filter frequency bands of said output signal into a plurality of separate transmission channels, wherein said plurality of separate transmission channels are associated with said communications network, and wherein said frequency bands are determined by programming said programmable filter as that taught by Liu et al. in order to provide an interface between a host operating system and a high speed communications system that provide forward compatible and expandable functionality.

Regarding Claim 2, O'Toole et al. discloses the limitation of communications network comprises a data network and a voice network (Fig. 2; column 1, lines 41-44).

Regarding Claim 3, O'Toole et al. discloses the limitation of line interface comprising: an analog to digital converter circuit (Fig. 7; column 7, lines 44-46), coupled between said broadband analog front end circuit and said programmable filter (Fig. 7; column 8, lines 36-47), configured to convert said output signal to a digital signal (column 7, lines 46-49), wherein said programmable filter is a digital programmable filter (column 7, lines 62-65).

Regarding Claim 4, O'Toole et al. discloses the limitation of plurality of separate transmission channels are directed to a plurality of different service providers (column 4, lines 26 – 30).

Regarding Claim 5, O'Toole et al. discloses the limitation of plurality of separate transmission channels are directed to a plurality of different modulation schemes (Fig. 4, column 3, lines 42 – 47).

Regarding Claim 6, O'Toole et al. discloses the limitation of the line interface of said programmable filter is programmed with software (column 7, lines 62-63).

Regarding Claim 7, O'Toole et al. discloses the limitation of the line interface wherein said software is downloaded to said programmable filter (column 5, lines 34-36).

Regarding Claim 8, O'Toole et al. discloses the limitation of the line interface wherein said plurality of separate frequency bands are determined according to a protocol including at least one of POTS, ISDN, ADSL, VDSL, SDSL, IDSL, HDSL, and HDSL2 (column 1, lines 30-35)

Regarding Claim 9, O'Toole et al. discloses the limitation of the line interface wherein said ADSL is one of full rate ADSL, G.Lite, CAP, and QAM (column 8, lines 63-67).



Regarding Claim 10, O'Toole et al. discloses the limitation of the line interface of said ADSL and said POTS coexist on said twisted pair telephone line (column 7, lines 4-5; lines 11-16).

Regarding Claim 11, O'Toole et al. discloses the limitation of the line interface comprising: a POTS detector circuit coupled to provide a POTS usage signal to said programmable filter indicating that a POTS bandwidth is in use (column 7, lines 22-28).

Regarding Claim 12, O'Toole et al. discloses the limitation of the line interface comprising: a POTS detector circuit coupled to provide a POTS usage signal to said programmable filter indicating that a POTS bandwidth is in use (column 7, lines 22-28). O'Toole et al. fails to disclose the T1E1.4 ADSL standards specifying an up to 255 channels for downstream transmission from central office to subscribers and up to 31 channels for upstream transmission from subscribers to the central office. Liu et al. discloses the limitation of the T1E1.4 ADSL standards specifying an up to 255 channels for downstream transmission from central office to subscribers and up to 31 channels for upstream transmission from subscribers to the central office (column 7, lines 54-58). It would have been obvious to modify O'Toole et al. to include the T1E1.4 ADSL standards specifying an up to 255 channels for downstream transmission from central office to subscribers and up to 31 channels for upstream transmission from subscribers to the central office as that taught by Liu et al. in order to provide an interface between a host operating system and a high speed communications system

that provide forward compatible and expandable functionality. However, both O'Toole et al. and Liu et al. fail to disclose an ADSL bandwidth is expanded to include said POTS bandwidth when said POTS usage signal indicates that said POTS bandwidth is not in use, and said ADSL bandwidth is reduced to exclude said POTS bandwidth when said POTS usage signal indicates that said POTS bandwidth is in use. Timm et al. discloses the limitation of wherein an ADSL bandwidth is expanded to include said POTS bandwidth when said POTS usage signal indicates that said POTS bandwidth is not in use (Abstract, lines 4-8), and said ADSL bandwidth is reduced to exclude said POTS bandwidth when said POTS usage signal indicates that said POTS bandwidth is in use (Abstract, lines 3-4). It would have been obvious to modify both O'Toole et al. and Liu et al. to include wherein an ADSL bandwidth is expanded to include said POTS bandwidth when said POTS usage signal indicates that said POTS bandwidth is not in use, and said ADSL bandwidth is reduced to exclude said POTS bandwidth when said POTS usage signal indicates that said POTS bandwidth is in use as that taught by Timm et al. in order to increase data communication rates and improved bandwidth.

Regarding Claim 13, O'Toole et al. discloses the limitation of the line interface of said POTS detector circuit detects whether a telephone connected to said twisted pair telephone wire is on hook or off hook (Abstract, lines 3-4).

Regarding Claim 14, O'Toole et al. discloses the limitation of the line interface comprising: a POTS detector circuit coupled to provide a POTS usage signal to said

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programmable filter indicating that a POTS bandwidth is in use(column 7, lines 22-28)O'Toole et al. fails to disclose the T1E1.4 ADSL standards specifying an up to 255 channels for downstream transmission from central office to subscribers and up to 31 channels for upstream transmission from subscribers to the central office. Liu et al. discloses the limitation of the T1E1.4 ADSL standards specifying an up to 255 channels for downstream transmission from central office to subscribers and up to 31 channels for upstream transmission from subscribers to the central office (column 7, lines 54-58). It would have been obvious to modify O'Toole et al. to include the T1E1.4 ADSL standards specifying an up to 255 channels for downstream transmission from central office to subscribers and up to 31 channels for upstream transmission from subscribers to the central office as that taught by Liu et al. in order to provide an interface between a host operating system and a high speed communications system that provide forward compatible and expandable functionality. However, both O'Toole et al. and Liu et al. fail to disclose said POTS detector circuit determines if a POTS signal is communicated in said ADSL bandwidth or if said POTS signal is communicated in said POTS bandwidth. Timm et al. discloses the limitation of said POTS detector circuit determines if a POTS signal is communicated in said ADSL bandwidth or if said POTS signal is communicated in said POTS bandwidth (column 4, lines 26-38). It would have been obvious to modify both O'Toole et al. and Liu et al. in include wherein an ADSL bandwidth is expanded to include said POTS detector circuit determines if a POTS signal is communicated in said ADSL bandwidth or if said POTS signal is

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communicated in said POTS bandwidth as that taught by Timm et al. in order to increase data communication rates and improved bandwidth.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACL 27 Aug 2004

  
**Ajit Patel**  
**Primary Examiner**